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Abstract

An improved system for invoicing, manufacturing, and re-programming implantable medical devices (IMDs) is disclosed. The system includes a web-enabled interface to receive manufacturing orders from remote sites such as healthcare facilities, other manufacturing sites, warehouses, and sales offices. The orders may include patient-specific information and/or requirements provided by the implanting physician or facility. For instance, patient-specific information may involve data obtained during prior patient evaluations, such as measured EKG signals and the like. This data is then used to select the software and/or hardware components to be incorporated into an IMD that is customized for the patient. For example, this data may be used to select particular software and/or hardware amplifier filters and/or digital signal processing (DSP) algorithms that may be best adapted to sense and process the unique signal characteristics associated with a patient's condition. Additionally, one or more software and/or hardware components may be selected for inclusion in the device based on optional therapies required by the patient, as determined by an implanting physician. Operating parameters may also be selected for the particular IMD. Based on the component selections, any unavailable components may be automatically ordered. Thereafter, the inventory management system may provide information to automated manufacturing and/or testing systems so that the IMD is built to order. According to another aspect of the invention, test signals generated using patient-specific data may be applied to the inputs of the manufactured IMD during test to ensure proper functioning of the customized device.